BOSTON'S ECONOMY

Excerpt From The

" Official Statement of the City of Boston, Massachusetts $75,000,000 General Obligation Bonds"

City of Boston
Mayor Thomas M. Menino

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September, 1995

THE ECONOMY

The City is the economic hub of both the Commonwealth and the New England region. It is a center for professional, business, financial, higher educational and medical services, as well as transportation, communication, export, cultural and entertainment activities. High technology, research and development, manufacturing and wholesale distribution also contribute to the economy of the City and its suburbs. The following description of the economic and demographic characteristics of the City is a summary of the more detailed material included in Appendix E of this Official Statement.

Current Economic Conditions

The current status of the Boston economy is one of an ongoing economic recovery following the 1988-1992 downturn. Economic results for 1993 and 1994 revealed the best performance since 1986-1988 as measured by many of the primary economic indicators. The 1995 economic record according to data for the first seven months shows continuing growth, though at a slower pace than for the previous two years.

Economic trends for Boston are positive, with increasing employment, declining unemployment rates, improvement in the office market, strong sales and stable prices in residential real estate, over $1 billion of private development construction investment in fiscal year 1994, and several large public sector projects underway to improve the infrastructure capacity of the City.

Employment increases are evident with the gain of 10,500 jobs (1.8%) in 1993 and with even stronger gains of over 15,000 jobs (2.6%) in 1994. Unemployment continues to decline with a 6.1% rate in July 1995, an improvement from the 9.2% rate registered four years ago in July 1991. The commercial real estate markets have improved from 1991 with the Class A office market vacancy rate reaching 10.6% early in 1995, down from a high of over 17% in 1991. Residential real estate posted its third year of increasing sales in 1994 and housing sales prices are stable with some gains beginning to show.

Additional data are outlined in the sections which follow and the full range of economic detail is included in Appendix E hereof.

Population

Boston's population reached 574,283 according to the 1990 Census, registering the first gain since the decade of the 1940s. The only City population data since 1990 has been an estimate for July 1992 showing 551,675, a slight decline attributed to the 1988-1992 recession. The City is the center of a metropolitan area of 2.8 million persons, and the capital of the Commonwealth with over 6 million residents. The population of Boston is young, in large part because of the high concentration of younger adults who come to the City to attend school or to work. Another characteristic of Boston's population is shown by the racial and ethnic diversity of its residents: the racial composition is 59% white and 41% minority.

Employment

The number of people who work in Boston reached 604,647 in calendar year 1994, a gain of over 15,000 from 1993 following a 12,000 rise in 1993 over 1992. The job gains in 1993 and 1994 were the first real rise since the regional recession began in late 1988. Data for July 1995 employment in metropolitan Boston show a 0.9% rise from July 1994, indicating further gains in the City's employment. The number of employed Boston residents decreased from 279,864 to 275,452 between July 1994 and 1995, a decrease of 1.6%. Employment gains in 1993 and 1994 were evident in the following industries: banking, financial securities, health services, educational services, social/cultural/non-profit services, and business and professional services. The City's economy, measured by employment, comprises 17.2% of the Massachusetts economy, and 7.8% of the entire New England region. The occupational distribution of Boston's workforce continues to shift from blue-collar positions to white-collar and services occupations.

Boston's unemployment rate continues to decline. In July1995 Boston's unemployment rate reached 6.1% which is down from the 9.2% reached four years ago in July 1991. The number of persons unemployed has fallen from 28,067 to 17,854 over the same period. Boston's unemployment rate in July 1995 was just slightly above both the Massachusetts rate of 5.8% and the U.S. unemployment rate of 5.9%

Commercial Markets

Boston continues to show economic strength in the retail, hotel, and office market sectors. Boston's regional retail market comprises a five-county area with over $34 billion in retail sales in 1994. Retail sales which were off in 1990 and 1991 rebounded through 1993, and have shown an even stronger pace through

1994. Boston's hotel market is one of the nation's best. After reaching a low of 69% in 1991 the occupancy rate was back up to 78% in 1994, well above the national city average of 68%; Boston's average daily room rate is $128 per night. Boston's office market is also improving. As of year-end 1994 the vacancy rate as reported by CB Commercial Office Vacancy Index (the "CB Index") was 10.6%. According to the CB Index, Boston ranked third among the top 20 downtown office markets in the nation. Rents and absorption have firmed up. Office rents average in the $25 to $26 per square foot range. Absorption of space picked up in 1992, 1993 and 1994 from the slack years of 1989 through 1991; preliminary absorption for 1994 was a strong 1,500,000 square feet.

Housing Market

Both the housing sales volume and housing prices have shown more strength over the last three years. In greater Boston there were 69,501 residential sales in 1994, an increase of 9.9% over 1992. Just in Boston there were 3,814 residential sales in 1994, a gain of 28.9% from 1993. For condominiums, greater Boston had 13,201 sales in 1994, a 15.4% rise from 1993. In Boston alone, condo sales increased to 2,668 in 1994, a gain of 8.9% from 1993. In addition, median sale prices for existing homes in greater Boston, from the National Association of Realtors, shows that the median purchase price of $179,100 is the highest recorded since 1989, and only off about 1.5% from the peak of $181,900 registered in 1989. The 1995 record shows a rise in residential sales volume and a fall in condominium sales with values just about stable.

Private Development

During the last two decades the public and private sectors carried out a major expansion of capital construction and investment activities. These activities are expected to continue to expand throughout the remainder of the 1990s, although at a slower rate than that which characterized the 1980s.

Current private development investment was estimated for calendar year 1994 to be over $1 billion of construction activity. Office and hotel construction is presently centered on several renovation projects and includes little new construction. The retail sector has seen activity in new retail malls and the redevelopment of existing ones. Housing activity is comprised mainly of projects to renovate and upgrade existing properties. Most new construction is taking place in the medical and higher education institutional sectors. Many of these projects involve significant upgrading of existing institutions but will not generate new property tax revenue. New private development is expected to slowly increase during the remainder of the 1990s, with the economic recovery drawing down vacancy rates, making new construction more desirable and financially feasible.

Large Public Sector Projects

During the balance of the 1990s, the Boston metropolitan area will be the site of several major public sector projects which are expected to be funded by federal, state and private sources. The depression of the Central Artery, the construction of a four-lane tunnel under Boston Harbor and other smaller transportation projects are estimated to cost over $7.7 billion plus inflation. In addition, the Massachusetts Water Resources Authority is also constructing one of the largest wastewater treatment facilities in the nation. The project is intended to bring wastewater discharge in Boston Harbor in compliance with federal and state requirements. The project is expected to cost $4.8 billion. Further, a $1.2 billion modernization project of Logan Airport by the Massachusetts Port Authority ("Massport") is now underway. This airport improvement program will modernize Logan's aging terminals, improve traffic circulation within the airport, and centralize parking. These improvements will create a more streamlined, efficient, and passenger-friendly airport.

These large public sector projects are now underway and are expected to take another 7 to 9 years to complete. These projects increase development investment, resident jobs and wages, and spin-off spending throughout the local economy. In addition, these large public projects, by providing new and improved transportation and water treatment facilities, lay the groundwork for enlarged capacity which will provide for more private sector development into the 21st century.

Another project currently being considered is the construction of a Megaplex, or a combined convention center and stadium complex which would be funded by a combination of private sources and the Commonwealth of Massachusetts. A special state commission recommended that a convention center, a football stadium, and a baseball stadium be located near the Fort Point waterfront. Legislation to that effect has been filed.

THE ECONOMY

General

The City is the economic hub of both the Commonwealth and the New England region. It is a center for professional, business, financial, higher educational and medical services, as well as transportation, communications, export, cultural and entertainment activities. As a government center, the City is the state capital and is host to several federal offices. High technology, research and development, manufacturing and wholesale distribution also contribute to the economy of the City and its suburbs.

The City of Boston is the twentieth largest city in the United States and the center of the seventh largest Consolidated Metropolitan Statistical Area (CMSA) in the nation, consisting of the Boston Primary Metropolitan Statistical Area ("PMSA") plus the contiguous PMSAs of Lawrence, Haverhill, Salem/Gloucester, Brockton, and Nashua, New Hampshire. The Boston CMSA had a population of 4.2 million in 1990, as reported by the U.S. Department of Commerce, Bureau of the Census (the "Bureau of the Census"). In 1990, the City had a population of 574,283, as reported by the Bureau of the Census, and had 622,433 jobs as reported by the U.S. Bureau of Economic Analysis from data of the Massachusetts Department of Employment and Training. The ratio of jobs to population indicates that the City provides a direct source of employment and income for an area which extends well beyond its borders. Measured in terms of jobs, the City's economy comprises approximately 17 percent of the Massachusetts economy and 8 percent of that of the six New England states.

In 1982, the City began a six year period of growth during which its economy exceeded many measures of economic growth nationwide. Beginning in 1989 the City, along with the Boston metropolitan area and the New England region, experienced an economic decline which was followed in 1990 by a national economic downturn.

Recent economic data show evidence of improvement. For example, Massachusetts employment, which had declined by 345,000 jobs in the four years between 1988 and 1992, is now increasing. Data from the Bureau of Economic Analysis for 1994 showed an increase of 70,000 jobs following a gain of 53,000 jobs in 1993. This was compared with a decline during the 1988-1992 time period. Also, unemployment rates, which peaked during the second quarter of 1991 in the Commonwealth at 10.3%, in the Boston metropolitan area at 8.4% and in the City at 9.3% all declined to levels between 5.1 and 6.1 percent in the Commonwealth, the Boston metropolitan area and the City by July of 1995. Moreover, according to data regarding office market vacancy rates from CB Commercial Coldwell Banker, Boston ranked as the third best city out of the top 20 downtown office markets. Finally, residential sales improved markedly in 1992 and 1993, as described more fully in "Housing Stock, Housing Values, and the Linkage Program," below. This rise in residential sales was most likely due to lower interest rates and attractive prices. Despite the raising of rates from February 1994 through June 1995 residential sales remained relatively strong.

Statistical Data

Statistical data relating to population, employment and income are derived primarily from four separate sources: the U.S. Census Bureau, the U.S. Bureau of Labor Statistics, the U.S. Bureau of Economic Analysis, and the City of Boston/Boston Redevelopment Authority, each of which is described below.

The U.S. Census Bureau publishes information about population, housing and the economy. Data from the 1990 Decennial Census of Population and Housing is now available for the City. In addition, some monthly and quarterly data are available through second quarter 1995 on certain topics for the region, Massachusetts, and the Boston metropolitan area. The U.S. Census Bureau does not publish such interim data for the City.

The U.S. Bureau of Labor Statistics publishes data and reports about the workforce and related subjects including unemployment rates, area wages, and cost-of-living adjustments. Final data for 1994 are the most recent annual data available; the most recent monthly data are for July 1995.

The U.S. Bureau of Economic Analysis publishes quarterly and annual statistics on income and employment. The most recent annual figures are from the September and December 1993 revised series, the May and August 1994 revised series, and the April, May and August 1995 revised series for the nation, Massachusetts, Metropolitan Counties and Suffolk County, which consists of the City plus the municipalities of Revere, Chelsea and Winthrop; the City comprises approximately 87% of the County's population and approximately 96% of its employment.

The City of Boston and the Boston Redevelopment Authority ("BRA") prepare reports and compile data on the population and economy of the City and its neighborhoods. BRA also provides data and trends from various local, regional, state and national sources on such topics as employment and occupation, large employers, city schools, universities and colleges, medical institutions, tourism and lodging, transportation, office and industrial markets, housing, building activity and urban redevelopment and infrastructure projects.

Statistical data do not necessarily reflect current activity because of delays resulting from the time required to collect, tabulate and publish such data. While the City believes that it has used the most recent data readily available to it in the discussion in this section, because of such necessary delays, the data contained herein may not reflect current conditions or trends. Additionally, statistical data are approximations and generalizations subject to various sources of error inherent in the statistical process, and may be revised on the basis of more complete data. Within such limits, the statistical data contained herein describe past activity and are not presented with a view to predicting future economic activity either in particular categories or in general.

New England, Massachusetts and Metropolitan Boston Economies

New England comprises a six-state region which has a combined population of 13.3 million persons and over 7.7 million jobs according to 1994 Bureau of Economic Analysis annual data. For most of the 1980s, the rate of growth in total personal income, per capita income and population for New England was higher than the national average. Beginning in 1989, this trend reversed as the New England economy began to slow down. While total personal income in New England grew at an annual average compound rate of 5.9% over the period from 1984 through 1994, just below the 6.1% national rate, in the most recent period for which data is available, from first quarter 1994 through first quarter 1995, personal income in New England grew at a rate of only 6.2% trailing the 6.7% national rate. Employment in New England, which grew by 1,394,000 jobs from 1982 through 1988 at a rate of 3.2% annually, declined by 620,000 jobs from 1988 through 1992 and then rose by 93,000 jobs in 1993. Annual 1994 data showed a gain of about 139,000 jobs during 1994. Thus, the net job gain between 1982 and 1994 was 1,006,000 jobs.

The Massachusetts economy, with 6.0 million people and 3.5 million jobs, has slowed and even contracted in some respects since 1988. Total personal income grew at a 5.6% annual average rate from 1984 through 1994; by contrast, from first quarter 1994 through first quarter 1995, it grew by 6.2% which is slightly below the 6.7% national average. Massachusetts gained nearly 625,000 jobs in the six-year period of 1982-1988, an average annual growth rate of 3.1%. It lost 345,000 jobs between 1988 and 1992 as minicomputer, defense and financial firms consolidated. In 1993 job gains again became evident as 53,000 jobs were gained; this was followed by a gain of 70,000 more jobs. The Commonwealth therefore had a net gain of 399,000 jobs during the period from 1982 through 1994.

The five-county Boston metropolitan area (consisting of Essex, Middlesex, Norfolk, Plymouth and Suffolk counties), which has 3.8 million people and 2.4 million jobs, has shown economic trends similar to those for the Commonwealth. Growth of 430,000 jobs from 1982 through 1988 was offset by the loss of 249,000 jobs from 1988 through 1992. The most recent data show a gain of about 30,000 jobs for 1993 and 56,000 jobs for 1994 (1993 data are from BEA and 1994 data are based upon the U.S. Bureau of Labor Statistics 790 employment trends adjusted to the Bureau of Economic Analysis employment series for consistency). The following table shows the 1984, and 1990-1994 trends; employment data for the City are set forth under "Employment Structure, Employment Trends and Occupational Changes" and its accompanying table.

Population, Income and Employment
1984, and 1990-1994
(income in current year dollars)

	1984	1990	1991	1992	1993	1994
United States						
Total Personal Income ($000)	$3,111,363,000	$4,655,420,000	$4,841,078,000	$5,137,875,000	$5,364,300,000	$5,649,010,000
Per Capita Income ($)	$13,332	$18,666	$19,201	$20,146	$20,809	$21,699
Population (000)	235,847	249,402	252,131	255,028	257,783	260,341
Employment (000)	120,769	138,981	137,738	138,479	140,818	144,403
New England						
Total Personal Income ($000)	$190,072,865	$289,960,801	$296,206,196	$308,514,875	$317,608,807	$334,453,655
Per Capita Income ($)	$15,034	$21,934	$22,424	$23,367	$24,149	$25,203
Population (000)	12,643	13,220	13,209	13,203	13,235	13,270
Employment (000)	7,150	7,834	7,493	7,425	7,518	7,657
Massachusetts						
Total Personal Income ($000)	$89,522,971	$133,890,016	$136,623,485	$141,412,636	$146,898,164	$154,705,030
Per Capita Income ($)	$15,326	$22,247	$22,764	$23,572	$24,411	$25,609
Population (000)	5,841	6,018	6,002	5,999	6,018	6,041
Employment (000)	3,390	3,612	3,438	3,409	3,462	3,532
Metropolitan Boston (1)						
Total Personal Income ($000)	$60,919,514	$91,821,774	$93,642,947	$97,501,915	$101,269,835	NA
Per Capita Income ($)	$16,384	$24,270	$24,839	$25,873	$26,786	NA
Population (000)	3,720	3,783	3,770	3,769	3,781	NA
Employment (000)	2,351	2,485	2,367	2,340	2,370	2,426*

(1) This metropolitan area includes five counties in Massachusetts (Essex, Middlesex, Norfolk, Plymouth and Suffolk) but excludes the one county in New Hampshire (Hillsborough) which together comprise the NECMA (New England Counties Metropolitan Area).

* 1994 employment is based on BLS 790 employment trends 1993-1994 applied to BEA data for 1993.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, May and August 1995 annual series except for 1994 Metropolitan Boston employment, see footnote * above.

Employment Structure, Employment Trends and Occupational Changes

Between 1984 and 1994, City employment continued to shift from traditional labor intensive manufacturing jobs to technology and service jobs, as shown in the table below, "City of Boston Employment, 1984-1994 Selected Years by Industry." Over the past ten years, the City's service industries, including transportation, communication, public utilities, finance, insurance and business and professional services, expanded their share of the City's total employment from 59% in 1984 to 64% in 1994, while the total employment in manufacturing and trade declined from 8% to 5% and from 15% to 12%, respectively. The economy of the Boston metropolitan area primarily rests on high technology, finance, professional and business services, defense, and educational and medical institutions. The City's economy is more specialized in the financial, business and professional services and educational and medical sectors than the suburban economy, which is more specialized in high technology and the defense industry. As used in this section, "business and professional services" includes many professions, such as law, accounting, engineering, advertising, and architecture, as well as business and miscellaneous services, i.e. data processing, bookkeeping, and building services.

The growth of 81,869 jobs from 1982 through 1988, the period of rapid growth, was offset by the loss of 73,424 jobs from 1988 through 1992, the recessionary time. Trends during the present recovery, for 1993 and 1994 show a gain of 25,576 jobs since 1992. The twelve year trend shows losses evident in construction, manufacturing, transportation, communication, utilities and wholesale and retail trade. The twelve year trend shows gains in most all of the finance, insurance, real estate and broad-based service industries.

City of Boston Employment, 1984, and 1990-1994 Selected Years by Industry

Industry	1984	1990	1991	1992	1993	1994
Fishing/Mining/Agriculture	1,230	1,141	1,038	999	984	1,057
Construction	13,434	13,296	10,900	10,313	10,984	12,079
Manufacturing	47,627	32,280	30,219	28,160	28,894	29,587
Transportation/Communication/Utilities	40,211	36,453	34,343	35,350	35,168	35,828
Wholesale Trade	28,716	19,427	16,982	16,198	15,834	15,634
Retail Trade	65,573	61,543	56,633	56,398	55,697	58,951
Finance/Insurance/Real Estate	85,667	93,162	88,109	85,382	85,839	91,123
Banking	25,455	24,514	21,695	22,174	21,624	22,368
Securities	11,626	23,004	23,883	24,697	26,638	30,132
Insurance	35,638	31,323	29,489	26,450	25,591	25,795
Real Estate and Other	12,947	14,322	13,043	12,062	11,986	12,828
Services	233,498	259,801	249,091	251,803	258,459	262,390
Hotel	9,830	13,336	12,229	11,953	11,508	11,665
Health	69,866	77,998	81,926	85,302	86,749	86,251
Educational	29,049	31,185	28,698	28,252	28,255	28,687
Cultural	6,522	9,581	8,519	9,156	9,115	9,053
Social and Non-profit	22,056	23,656	22,248	22,633	23,666	22,512
Business and Professional	83,776	92,431	84,982	84,387	88,787	93,850
Personal and Repair	12,399	11,615	10,489	10,120	10,381	10,372
Government	92,950	105,330	98,532	94,469	97,773	97,998
Total	608,906	622,433	585,849	579,071	589,630	604,647

Source: 1984-1993 figures are mathematically derived from U.S. Bureau of Economic Analysis Series for Suffolk County ("BEA Series, May 1995, Revised") pro-rated to Boston geography. 1994 data are based on Massachusetts Department of Employment and Training (this series represents payroll jobs covered by the unemployment security system). These Boston employment data are used to derive an equivalent 1994 BEA series (for all jobs, full and part-time). Due to use of pro-rating factors, minor discrepancies of 1 to 3 units between totals and employment categories may result.

The Boston metropolitan area comprises about two-thirds of the Massachusetts state economy, which is interrelated with the economies of the other New England states. Consequently, the City's job losses since the peak of 1988 should be viewed in the context of regional job loss. The following table charts jobs lost in the region for 1988 through the low point of the recession in 1992 and the regional recovery through 1994.

Job Change in the New England Region, 1988-1994

							1988-1994	
Area	1988-1989	1989-1990	1990-1991	1991-1992	1992-1993	1993-1994	Total Job Loss	Percentage Change
New England	(38,256)	(173,594)	(340,764)	(67,616)	93,191	138,841	(388,198)	(4.8)
Massachusetts	(40,797)	(105,000)	(174,322)	(28,775)	52,473	70,229	(226,192)	(6.0)
Metro Boston (1)	(33,182)	(70,756)	(118,465)	(27,118)	30,474	55,432	(163,615)	(6.3)
Boston	(15,110)	(14,952)	(36,584)	(6,778)	10,559	15,017	(47,848)	(7.3)

(1) This metropolitan area includes the following five Massachusetts counties: Essex, Middlesex, Norfolk, Plymouth and Suffolk.

Source: U.S. Bureau of Economic Analysis (BEA) for 1988-1994, May and August 1995 series. Boston data derived from BEA series and Department and Employment and Training (DET) employment data as described under "City of Boston Employment by Industry," 1984-1994. All Percentages based since 1988. Data for 1994 for Metro Boston were derived from the percentage change of Bureau of Labor Statistics (BLS) "790 Series" for Non-Agricultural Employment applied to BEA data.

As of 1990, 67% of City residents were white-collar workers, 17% were service workers and 16% were blue-collar workers, as compared to 60% white-collar workers, 18% service workers and 22% blue-collar workers in 1980. As the table below, "Occupational Change in the City's Resident Labor Force," shows, this trend among City residents away from blue-collar occupations and toward white-collar and service occupations has continued since 1960. Job losses during the 1988-1992 recession, as reflected in occupational employment data for the Boston metropolitan area by the Massachusetts Department of Employment and Training, show about equal losses for white-collar and blue-collar employees.

Occupational Change in the City's Resident Labor Force

	1960		1970		1980		1990	
	Number	%	Number	%	Number	%	Number	%
White-Collar	126,471	44%	146,657	55%	154,456	60%	191,251	67%
Professional & Technical	33,476	12	44,894	17	51,979	20	65,251	23
Managerial	15,604	5	15,035	6	25,238	10	41,955	15
Clerical & Administrative	58,990	21	71,655	27	58,451	23	56,950	20
Sales	18,401	6	15,073	6	18,788	7	27,095	9
Blue-Collar	96,576	34	75,160	28	54,452	22	47,498	16
Craftsmen	32,398	11	27,157	10	19,772	8	18,453	6
Operatives	52,175	18	36,695	14	24,825	10	19,971	7
Laborers & Farm	12,003	4	11,308	4	9,855	4	9,074	3
Service	38,034	13	44,688	17	47,109	18	49,955	17
Not Reported	27,115	9	—	—	—	—	—	—
Total	288,196	100%	266,505	100%	256,017	100%	288,704	100%

Source: U.S. Department of Commerce, Bureau of the Census for 1960, 1970, 1980 and 1990.
Percentages may not add due to rounding.

Unemployment

Unemployment in the City increased from a low of 3.2% in 1987 to a high of 8.5% in 1991. The City's average annual unemployment rate remained below the national rate through 1989 and equaled the national rate in 1990. Unemployment rates for Massachusetts and the New England region exceeded the national average in 1990 for the first time in more than a decade. July 1995 data show that the City's unemployment rate of 6.1% was just above both the national average of 5.9% and the Massachusetts rate of 5.8%. As the following table illustrates, 1994 and 1995 monthly unemployment data show a general improvement over results from 1993 and before. As of July 1995, 17,854 Boston residents were unemployed. The 1990 Census data for Boston, which differ from the Bureau of Labor Statistics rates shown below due to sample size, showed that when Boston's total unemployment rate was 8.3%, the rate for whites was 6.4%, the rate for all minority groups combined was 12.6%, and the rate for all youth aged 16-19 years was 18.9%. This pattern is typical of many of the nation's urban centers.

Annual Unemployment Rates

	1982	1987	1989	1990	1991	1992	1993	1994
City	9.1%	3.3%	3.9%	5.5%	8.5%	8.0%	6.5%	5.8%
Boston PMSA(1)	6.7	2.8	3.4	5.1	7.8	7.5	6.0	5.2
Massachusetts	7.9	3.3	4.0	6.0	9.0	8.5	6.9	6.0
New England	7.8	3.1	3.8	5.7	8.0	8.0	6.8	5.9
United States	9.7	5.5	5.3	5.5	6.7	7.4	6.8	6.1

(1) Primary Metropolitan Statistical Area, consisting of the City and 105 contiguous municipalities, with a population of approximately 2.8 million in 1990 according to U.S. Census data.
Sources: U.S. Bureau of Labor Statistics for United States, New England and Massachusetts and Massachusetts Department of Employment and Training for the City and Boston PMSA.

Monthly Unemployment Rates for Boston, Boston PMSA, Massachusetts, New England and the United States for 1993, 1994 and 1995(1)

	Boston			Metropolitan Boston			Massachusetts			New England			United States		
	1993	1994	1995	1993	1994	1995	1993	1994	1995	1993	1994	1995	1993	1994	1995
Jan.	7.2	6.5	6.0	7.1	6.3	5.6	8.5	7.1	6.6	7.9	7.4	6.7	7.9	7.3	6.2
Feb.	7.2	6.0	5.5	7.0	5.9	5.3	8.3	7.1	6.2	7.5	7.0	6.6	7.7	7.1	5.9
Mar.	6.7	5.6	4.7	6.4	5.5	4.4	7.6	6.7	5.2	7.0	6.4	5.9	7.3	6.8	5.7
Apr.	6.0	5.3	5.5	5.7	4.9	5.0	6.6	5.8	5.7	7.0	5.7	5.5	6.8	6.2	5.6
May	6.3	5.2	4.5	5.8	4.7	4.1	6.6	5.4	4.6	6.7	5.6	4.8	6.7	5.9	5.5
Jun.	6.1	6.0	5.7	5.6	5.3	5.1	6.4	6.0	5.6	6.5	5.8	5.4	7.1	6.2	5.8
Jul.	6.4	6.1	6.1	5.8	5.3	5.1	6.6	6.0	5.8	6.2	6.0	6.0	6.9	6.2	5.9
Aug.	6.8	5.9	NA	5.9	5.1	NA	6.6	5.6	NA	6.1	5.9	NA	6.5	5.9	NA
Sep.	7.3	5.7	NA	6.3	4.9	NA	7.1	5.4	NA	6.2	5.2	NA	6.4	5.6	NA
Oct.	6.2	6.2	NA	5.5	5.3	NA	6.2	5.9	NA	5.8	5.2	NA	6.3	5.4	NA
Nov.	5.8	5.3	NA	5.3	4.6	NA	6.1	5.2	NA	6.0	5.6	NA	6.1	5.3	NA
Dec.	5.3	5.1	NA	4.8	4.7	NA	5.8	5.3	NA	5.9	5.2	NA	6.0	5.1	NA

(1) Unemployment rates are not seasonally adjusted. Data preliminary and subject to revision.
Sources: U.S. Bureau of Labor Statistics for United States, New England and Massachusetts and Massachusetts Department of Employment and Training for the City and Boston PMSA.

Large Employers

The following table lists the thirty-four largest private employers in Boston, which had an aggregate of approximately 103,000 employees in 1991, or approximately 17.5% of private sector employment,. This is the most recently available comprehensive listing.

Largest Private Employers in Boston, 1991
(listed alphabetically)

Affiliated Publications Inc./ Globe News	Jordan Marsh Stores Corp.
Bank of Boston Corp.	Liberty Mutual Fire Insurance Co.
Blue Cross & Blue Shield of Massachusetts	Massachusetts Eye & Ear Infirmary
Boston Edison Company	Melrose Management Inc.
Boston Safe Deposit & Trust Company	New England Baptist Health Care Corp.
Boston University	New England Deaconess Hospital Corp.
Brigham & Women's Hospital Inc.	New England Medical Center Hospital
Carney Hospital Inc.	New England Mutual Life Insurance Co.
Children's Hospital Corporation	New England Telephone & Telegraph Company
Commercial Union Corp.	Northeastern University
Faulkner Corp.	Putnam Companies, Inc.
Federal Reserve Bank of Boston	Shawmut Corporation
Fleet Bank of Massachusetts NA	St. Elizabeth's Hospital of Boston, Inc.
FMR Corporation (Fidelity Investments)	State Street Boston Corp.
General Hospital Corp. (Mass. General)	Stone & Webster Engineering Corporation
John Hancock Mutual Life Insurance	The Employers Fire Insurance Co.
The Gillette Company	University Hospital, Inc.

Source: Economic Development and Industrial Corp. of Boston, 1993, based in part on data from Dun and Bradstreet.

In addition, the public sector has large numbers of employees in the City. According to the Department of Employment and Training, there were over 98,000 government workers in the City in 1994, a reduction of 8,945 from 1988 levels. Certain state government offices, federal regional offices, U.S. Postal Service facilities and state-chartered authorities and commissions and the City's local government are all located within the City.

Labor Force and Education

According to U.S. Department of Commerce, Bureau of the Census, the City's resident labor force declined during the 1970s but increased during the 1980s. In contrast to the 12% decline in population between 1970 and 1980, the City's labor force (those residents aged 16 and over, available to work) declined by only 4%. The difference in these rates of decline was attributable to the fact that the decline in population was concentrated in the under-16 age group. Since 1980, both the increasing population and its increasing age have combined with the rising labor force participation of women, minorities, youth and the elderly to produce a larger labor force. By 1990, the City's population had increased by 2% over 1980 levels, while the City's labor force increased by 12.8% in the same period, according to data from the U.S. Bureau of the Census.

General improvement in educational attainment of residents aged 25 and over continued throughout the 1970-1990 period. The percentage of this population that had completed four or more years of college almost tripled during this period from 10.4% to 30%. This change, in part, reflected the trend for an increasing percentage of graduates of the City school system to seek higher education. This percentage increased from 25% in 1960 to 36% in 1970, 44% in 1977, 54% in 1982 and 66% in 1990, and declined to 63% in 1994, based upon Boston School Department figures. Improving educational attainment levels and shifting occupational patterns suggest a concurrent transformation of the City's work force as the City's economy has moved to a service-dominated base.

The City supports entry-level and advanced job training programs, including the following: English-as-a-Second Language training, pre-vocational and vocational training, adult literacy training, and support counseling. In addition, linkage contributions paid into the Neighborhood Jobs Trust provide a supplemental source of funding for job training programs. For a full discussion of the City's linkage program see "Housing Stock, Housing Values, and the Linkage Program."

Years of School Completed for Boston Residents Age 25 and Over, 1970-1990

	1970		1980		1990	
	Persons	Percent	Persons	Percent	Persons	Percent
0-8 years	91,582	26.1%	54,932	16.6%	37,824	10.3%
1-3 years of high school	71,511	20.4	49,407	14.9	51,051	14.0
High school graduate	120,350	34.3	115,787	35.0	97,233	26.6
1-3 years college	30,876	8.8	43,451	13.2	69,889	19.1
4 or more years of college	36,245	10.4	67,073	20.3	109,711	30.0
Total	350,564	100.0%	330,650	100.0%	365,708	100.0%

Source: U.S. Department of Commerce, Bureau of the Census; 1970, 1980 and 1990.

Income, Wages, and Cost of Living

Per capita personal income for Suffolk County was $27,059 in 1993, 30% above national per capita personal income of $20,809, according to the U.S. Bureau of Economic Analysis. An historical summary of per capita income shows that, from 1980 to 1990, Suffolk County's per capita income grew at a rate greater than that for the nation, in contrast to the 1970-1980 period when it rose at a slower rate. Suffolk County's per capita income grew at a faster rate than the per capita income growth rates for the United States, New England, Massachusetts and Metropolitan Boston (as defined in the chart below) between 1990 and 1993. The City's median household income (in current year dollars), based on U.S. Census data, rose from $7,835 in 1970, to $12,530 in 1980 and $29,180 in 1990. The figures in this paragraph and the chart directly below reflect earned income of persons residing in the named areas plus rents, interest and other unearned income and transfer payments from governmental entities. As such, these figures take into account certain income sources not included in the survey of average annual wages in the following paragraph, which reflects earned income of persons who work (but do not necessarily reside) in the named areas.

Per Capita Personal Income Comparison, 1970, 1980, and 1985-1994
(in current year dollars not adjusted for inflation)

	United States	New England	Massachusetts	Metro Boston[1]	Suffolk County[2]
1970	$ 4,047	$ 4,445	$ 4,515	$ 4,539	$ 4,706
1980	9,940	10,582	10,659	10,766	10,562
1985	14,155	16,113	16,423	16,778	16,019
1986	14,906	17,418	17,796	18,143	17,314
1987	15,638	18,670	19,066	19,431	18,856
1988	16,610	20,276	20,787	21,205	21,297
1989	17,690	21,325	21,688	22,038	22,758
1990	18,666	21,934	22,247	22,589	24,150
1991	19,201	22,424	22,764	23,146	24,939
1992	20,146	23,367	23,572	24,043	26,130
1993	20,809	24,129	24,411	24,861	27,059
1994	21,699	25,203	25,609	NA	NA

(1) Metropolitan Boston denotes the New England County Metropolitan Area (NECMA), which is larger than the Primary Metropolitan Statistical Area (PMSA); this consists of five Massachusetts counties and Hillsborough County in New Hampshire.
(2) City residents constitute approximately 87% of Suffolk County's population.
Source: U.S. Dept. of Commerce. Bureau of Economic Analysis, April, May and August 1995 Revised Series.

The December 1994 report from the U.S. Bureau of Economic Analysis indicates that average annual wages earned for 1993, by place of work, have been consistently higher in Suffolk County than in the Boston metropolitan area and the Commonwealth. Except for manufacturing and wholesale trade, wages in Suffolk County were higher for all major industry types. For all industries combined, Suffolk County's average wage level ($36,147) was 21% greater than that in the Boston metropolitan area ($29,874) and 23.1% greater than the average state wage level ($29,370). The average annual wage level reflects income earned by an individual from work in a particular industry.

During the ten years 1984-1994, based on the U.S. Bureau of Labor Statistics Consumer Price Index, the cost of living index rose at an annual average rate of 4.0% in the Boston metropolitan area, while the national index increased at a 3.6% annual rate. From July 1994 to July 1995, the cost of living in the Boston metropolitan area rose 2.5%, compared to a 2.8% rate for the nation.

Population

The U.S. Census reported the City's population as 574,283 in 1990, a 2% increase over 1980 and the first increase since 1950. The number of households in the City increased from 217,622 in 1970, to 218,457 in

1980, and to 228,464 in 1990, while household size fell from 2.8 to 2.4 persons per household from 1970 to 1990. The Census Bureau population estimate for Massachusetts on July 1, 1992 was 5,998,000 or a reduction of 18,425 persons (-0.3%) from the 1990 census. The most recent local Census Bureau population estimate for Boston is as of July 1, 1992, which showed a decline of 3.9% since April 1990, from 574,283 to 551,675.

Population of the Commonwealth and Boston Metropolitan Area 1970, 1980, and 1990

	1970	1980	1990	Change 1970-1980	Percent Change 1970-1980	Change 1980-1990	Percent Change 1980-1990
Massachusetts	5,689,170	5,737,037	6,016,425	47,867	0.8 %	279,388	4.9%
Metropolitan Boston	2,899,101	2,763,257	2,794,280 (1)	(135,844)	(4.7)	31,023 (1)	1.1(1)
City of Boston	641,071	562,994	574,283	(78,077)	(12.2)	11,289	2.0

(1) Because of a metropolitan area boundary change from Standard Metropolitan Statistical Area ("SMSA") to PMSA, the 1980-1990 change is based on a PMSA population of 2,805,911 in 1980. The 1970-1980 change is based on the SMSA, a slightly smaller geographic area than the PMSA, comprising 92 cities and towns.

Source: U.S. Department of Commerce, Bureau of the Census.

Medical and Higher Educational Institutions

The City's medical and educational institutions are an important component of its economy, providing employment opportunities for residents of the City and the Boston metropolitan area. Expenditures by the institutions' patients, students and visitors are important to the City's trade and service sectors.

Thirty-one inpatient hospitals are located within the City, including Massachusetts General Hospital, Brigham and Women's Hospital, Beth Israel Hospital, Children's Hospital, New England Deaconess Hospital, the New England Medical Center and Boston City Hospital. For further information on Boston City Hospital, see "Sources of City Revenue—Departmental Revenues—Department of Health and Hospitals" and "City Indebtedness—Boston City Hospital". The City is also the home of the medical and dental schools of Harvard, Tufts and Boston Universities, and of twenty-five public neighborhood health clinics, not including health maintenance organizations and membership clinics.

In 1994, there were an estimated 87,877 persons employed in health services in the City, based on a series consistent with U.S. Bureau of Economic Analysis data. Health services represent 1 out of every 7 jobs within the City. Growth in the health services sector has been stable, despite varying economic conditions. Data from the U.S. Census Bureau, County Business Patterns, showed that the number of hospital employees in Suffolk County between 1987 and 1992 grew from 47,154 to 56,722.

According to the BRA, the City's hospital and medical school community has invested $750 million in new facilities from 1984 to 1993, and from 1994 forward is expected to spend an additional $980 million on upgrading clinical facilities. Large new projects are currently under construction at the following City hospitals: Massachusetts General Hospital, Beth Israel Hospital, New England Deaconess Hospital, and New England Medical Center. Since 1993, in response to pressure from a variety of sources to hold down health care costs, several Boston hospitals including University Hospital, Brigham and Women's Hospital, Carney Hospital, Franciscan Hospital, and Massachusetts General Hospital announced plans to reduce the size of their workforce. In addition, Massachusetts General Hospital has decided to scale back its construction program.

Based on data from the National Institutes of Health, the City is tied for the nation's largest center for health research with New York City. The medical research institutions within Boston received $598 million in National Institutes of Health awards in fiscal 1993. This was a 4.3% increase (after adjusting for inflation) from fiscal year 1992. According to the National Institute of Health Division of Research Grants, six of the seven independent hospitals in the nation which received the most National Institutes of Health research funding in 1993 are located in the City. The BRA reports that privately-funded research in the City included a $100 million, ten-year agreement between Dana-Farber Cancer Institute and Sandoz Pharmaceutical Ltd. Additionally, Massachusetts General Hospital received $46.6 million in fiscal 1992 from pharmaceutical, chemical and cosmetic companies to conduct corporate sponsored research. According to a 1991 BRA report, in 1990 the City's medical research institutions occupied nearly 2.7 million square feet of research space, and there was a demand for an additional 2.6 million square feet; approximately 707,000 square feet of new research space was occupied in 1991 and 1992.

In addition to these public and not-for-profit research facilities, over 100 biotechnology firms are located in the Boston metropolitan area. According to a 1990 Ernst & Young study, "Biotech 91: A Changing Environ-

ment," the Boston metropolitan area is the nation's second largest center for biotechnology by total revenue, and third largest by number of firms.

As of 1993, the New England Board of Higher Education reported 68 colleges and universities in the Boston metropolitan area, at which approximately 240,000 students were enrolled. The City's 29 universities, colleges and community colleges had a combined enrollment in fall 1993 of approximately 114,430, an 8% gain from fall of 1992. In addition, some graduate schools of Harvard and Tufts Universities, whose principal campuses are in Cambridge and Medford, respectively, had nearly 4,000 students in the City in 1993. Based on total graduate and undergraduate enrollment, Northeastern University is the largest university in Boston, with 29,712 students in 1993.

Educational institutions are a source of new highly skilled professionals for the City's labor force. For example, according to the Massachusetts Institute of Technology, although only 10% of its enrollees over the decade of the 1980s were from the Boston area, 24% remained in the area after graduation.

By the end of calendar year 1993, large projects at educational institutions in the City accounted for approximately $240 million of investment over the prior 24-month period, according to the BRA. These include new construction at Boston University, Northeastern University, Tufts University, Boston College, the Massachusetts College of Pharmacy and Harvard University.

Tourism

According to the Greater Boston Convention and Visitors Bureau ("CVB"), an estimated 9.1 million people visited the Boston metropolitan area in 1993, surpassing the peak of approximately 8.8 million visitors in 1988. These visitors, measured as tourists, business travelers and convention and meeting delegates who travelled at least 100 miles to get to the City, had an estimated total economic impact upon the Boston metropolitan area of $7.1 billion in hotel accommodations, meals, entertainment, shopping, transportation and other services during 1993, according to the CVB. Data for 1994 are not yet available.

A growing number of visitors to the City are visitors to conventions, trade shows and exhibits. The CVB reports that in 1992, approximately 1.13 million persons are estimated to have attended such functions in the City, an increase of 13% from 1988. According to national figures from a 1990 survey by "Business Travel News," the City ranked as the 21st largest convention city in the nation in 1989 with 525,000 convention delegates. Trade and gate show visitors and meeting attendees accounted for another 475,000 in 1989. The John B. Hynes Veterans Memorial Convention Center, the World Trade Center and the Bayside Exposition Center have a combined full capacity of well over one million people per year

The number of visitors in 1993 reflected an increase of 4% in convention, tourism and business visitors over 1992 results. Several large conventions occurred in 1993, notably MacWorld Expo, which drew 57,000 people. Other significant conventions included The 18th Annual Yankee Dental Congress and the International Seafood Show. In the tourism category in 1992, Sail Boston, the tall ships flotilla, drew an estimated 6 million attendees, including visitors (as defined above) and local residents who directly spent an estimated $315 million in restaurants, shops, and hotels with a total estimated economic impact of $500 million.

The City provides a venue for concerts, ice shows, circuses, plays, and other entertainment and sports events. The City is home to three major league sports franchises: the Boston Red Sox baseball team, the Boston Bruins hockey team and the Boston Celtics basketball team. A new privately financed, multi-purpose arena in Boston's North Station District has been constructed by the New Boston Garden Corporation, a subsidiary of Delaware North, owner of the existing Boston Garden/North Station. The new facility will open on September 30, 1995.

The Commonwealth of Massachusetts has created a special commission through Chapter 6 of The Acts of 1995. The Commission was charged with recommending the appropriate location for a convention center and stadium complex which would be funded by a combination of private sources and the Commonwealth of Massachusetts. A special State Commission recommended that a convention center, a football stadium, and a baseball stadium be located near the Fort Point waterfront. Legislation to that effect has been filed.

Hotel Market

The BRA reports that from 1980 through 1989, fourteen hotel projects, including eleven new hotels and three additions to existing hotels, added 4,885 new rooms to the City's hotel stock. The number of hotel rooms in the City has risen from 6,907 in 1980 to 11,792 by 1991, an increase of 71%. From 1980 through 1988 annual occupancy rates were in the range of 68% to 76% even as many new rooms were completed and average

room rates continued to rise. The occupancy rate peaked at 74.5% in 1988 and then declined slowly to a rate of 68.3% in 1991. In 1992, the rate improved to 72.3% compared to a national average of 66.8%. Data for 1993 showed a 75.2% occupancy rate. Data released by PKF Consulting showed a 1994 rate of 77.9% for Boston. Data for part of 1995 show a better performance than 1994. According to Hospitality Valuation Services, a trade association, a hotel occupancy rate of 65% is generally considered to be profitable in the lodging industry.

In late 1993 the newest hotel in the City was completed which is the 270-room Hyatt Hotel and Conference Center at Logan International Airport. Beyond that two other hotel projects have emerged. A new 429-room hotel project by John Drew Company, to be located on Northern Avenue across from the World Trade Center at Commonwealth Pier, will begin construction in October 1995. The City is working toward a fall or winter 1995 start for a time-share resort renovation of the Custom's House Tower building to be undertaken by the Marriott Corporation. Several other new hotels have been proposed, but since required approvals have not yet been obtained no completions would start before 1996.

Transportation

The City is a major national and international air terminus, a seaport and the center of New England's rail, truck and bus service. The City is served by three limited-access interstate highways which connect it to the national highway system: U.S. 90 (the "Massachusetts Turnpike"), which leads westward from downtown Boston to the New York State border; U.S. 95, the East Coast's principal north-south highway, which connects Boston to Portland, Maine to the north and New York City and Washington, D.C. to the south; and U.S. 93, another north-south highway, that extends from just south of the City to New Hampshire and Maine. The City is also served by two national railroads, Amtrak and Conrail, a regional rail carrier, Boston and Maine (a subsidiary of Guilford Transportation Industries), and Bay Colony (a local carrier).

Transportation planning includes both major highway and mass transit programs. Federal transportation legislation has enabled the Massachusetts Bay Transportation Authority (MBTA), which provides commuter rail, subway, local bus and express bus services to 78 cities and towns in eastern Massachusetts, to receive approximately $3.8 billion between 1965 and 1993. Transportation planning for mass transit facilities in the City is mainly under the auspices of the MBTA. In addition to federal money, since 1983, the MBTA has undertaken capital projects in the amount of $3.5 billion, most of which comes from state bond issues. The MBTA's current capital program includes a variety of expansion and rehabilitation projects; its five year program anticipates spending $300 million annually.

Other MBTA capital funds will go toward the ongoing improvement, renewal and modernization of equipment, facilities, service utilities, tunnels and bridges. MBTA capital program projects are funded through the federal government and MBTA bonds and certificates of participation. For a discussion of the City's obligation with respect to the MBTA, see "City Indebtedness—Indirect Debt."

Work is underway on the MBTA's North Station Transportation Center Project, which includes construction of an underground parking garage and a new commuter rail terminal. The new subway superstation, as well as the relocation of the existing light rail viaduct to an underground structure, is planned and is scheduled to begin in the fall of 1995. The MBTA's South Station Transportation Center project continues with the construction of an intercity bus terminal and parking garage above the existing rail terminal. The MBTA began limited commuter rail service to Worcester in the fall of 1994 with full service planned for 1996. The MBTA is planning to restore commuter rail service on the Old Colony Rail Line, which will provide commuter rail service to several of Boston's South Shore suburbs. About 80 percent of the cost of this project will be funded by the federal government. State monies and bond funds will pay for the remaining share. Construction of a portion of this project, involving two rail spurs, began in early 1993 and is anticipated to be completed by 1996. A third rail spur on this line is still under consideration.

The South Boston Piers Transitway/Electric Trolley Bus Project is a $438 million long range plan to connect South Station with the proposed new Federal Courthouse at Fan Pier and the World Trade Center. The Final Environmental Impact Report was completed in December 1993 and the Final Environmental Impact Statement was reviewed by the Federal Transit Administration and the Massachusetts Executive Office of Environmental Affairs. The project was approved in the Spring of 1994 and construction is to begin in late 1995. The MBTA has a commitment assurance of $278 million and is negotiating for the additional funding.

Amtrak spent $170 million during 1994, as part of a multi-year infrastructure project of $865 million, to increase the speed of rail service between Boston and New York City, and expects to complete electrification of the Boston to New Haven, Connecticut corridor by 1997. Amtrak is currently experimenting with high-speed train sets, which, when combined with electrification, could drop the rail travel time from downtown Boston to

downtown New York City to under three hours, which is competitive with air travel. At the present time, Amtrak is pursuing an acquisition program to procure at least 26 of the high-speed trains and at least six different possible vendors have emerged who may compete for the bid. Revenue for the trains is separate from the infrastructure project and has been appropriated. The federal "Intermodal Surface Transportation Efficiency Act of 1991" authorized several of these projects described above; specifically the South Boston Piers Transit planning and Amtrak electrification.

See "Large Public Sector Projects" for a description of the depression of the Central Artery and the construction of a third tunnel under Boston Harbor, two other significant transportation projects in the City.

Seaport and Airport

The Massachusetts Port Authority ("Massport") was created by the state legislature in 1959 to stimulate and support the Commonwealth's economy through development and management of the City's major air and sea transportation centers and the Tobin Memorial Bridge over the Mystic River. Massport is financially independent, and the City is not responsible for any debt or other obligations incurred by Massport. Heavy use of Boston Logan International Airport ("Logan Airport") and the Port of Boston has compelled significant expansion of both facilities. Massport spent a total of $747.0 million consisting of $422.0 million on airports and $325.0 million on Tobin Bridge, maritime, development and other capital spending projects from 1981 through 1993.

The Port of Boston serves the six-state New England region and beyond as a natural deep-water berth, and provides access to world ports as well as feeder service several times weekly to Halifax, Canada and the Port of New York. The City's port activity includes handling bulk and general cargo, providing ship repair supply services, offering customs and international trading services, providing storage facilities and other commercial maritime services.

The City's port tonnage fell from the 1950s through the mid 1980s as a result of changes in transportation technology and in the regional economy. In 1990, according to the U.S. Army Corps of Engineers, the Port of Boston ranked as the 21st largest American seaport by total tonnage shipped and as the 18th largest American seaport by foreign tonnage shipped. During fiscal 1994, 1.3 million tons of containerized cargo (highest in recent history) and almost 16 million tons of bulk cargo (commodities and raw materials) worth over $8.5 billion were shipped through the City's three public and 23 private container terminals.

Logan Airport in 1994 was served by 39 domestic and international airlines. In calendar year 1994, Logan Airport, serving a total of 25.2 million passengers, was the most active airport in New England, the thirteenth most active in the United States and the 19th most active in the world, according to the Airports Association Council International (AACI). Total passenger volume at Logan Airport increased by 5.3% annually between fiscal 1979 and fiscal 1988. Between fiscal 1988 and fiscal 1993 Logan Airport's total passenger traffic decreased at a 1.4% average annual rate, due primarily to the national and regional economic recession, events in the Persian Gulf and overall increases in airline fares. Since 1992 the number of passengers served has again increased. Preliminary results for calendar year 1994 indicate that 25.2 million passengers were served, a gain of 4.8% from the 24 million passengers of 1993 and a 9.6% rise from the 23 million mark reached in 1992.

Logan Airport also plays an important role as a center for processing domestic and international air cargo. According to AACI, in 1991 Logan Airport ranked 14th in the nation in total air cargo volume. Between fiscal 1988 and 1992 the total volume of air cargo handled at Logan Airport grew by 6.5%. In 1994 total cargo had increased by 12.1% over the two years since 1992, reaching 778 million pounds of cargo shipped and 142 million pounds of mail handled.

In 1993, Massport projected that it would spend an average of about $78 million annually during fiscal 1993 through 1997 for ongoing capital improvements to Logan Airport, Hanscom Field, Tobin Memorial Bridge and the port facilities, and for improvements and major maintenance at various Massport properties. Massport currently expects to finance these projects with a combination of bond proceeds, federal grants and internally generated funds.

Construction Activity

During the last two decades the public and private sectors carried out a major expansion of capital construction and investment activity. Private commercial development investment has added over 16 million square feet of office space to the physical inventory of the City since 1975, five times the amount built in the previous 35 years.

The following table sets forth the estimated potential construction activity in the City from 1984-1995, estimated as indicated in the notes to the table. It should be noted that the issuance of a building permit and payment of a fee do not necessarily result in construction activity.

Revenue from building permit fees during the three-year period of fiscal 1986, fiscal 1987 and fiscal 1988 indicated that the estimate of total potential construction activity for such period was $6.6 billion, or an annual average of $2.2 billion. Revenue from building permit fees in fiscal years 1989 and 1990 indicated that total estimated construction activity dropped by an average of $0.5 billion dollars in each year. After building permit revenues reached a low of $6,689,380 in fiscal 1991, they exceeded 1990 levels in fiscal 1992, 1993, 1994, and 1995 indicating estimated potential construction activity of approximately $1 billion in each of fiscal years 1992, 1993, 1994, and 1995. Fiscal 1995 is based on annualized trends of data for three quarters of the year compared to three quarter 1994 results.

Boston Building Permit Revenues and Estimated Potential Construction Activity
Fiscal Years 1984-1995

	Building Permit Revenues[1]	Estimated Potential Construction Activity[2]	Estimated Potential Construction Activity Adjusted For Inflation[3]
1984	$ 5,594,683	$ 658,198,000	$ 1,016,571,691
1985	7,435,576	874,773,647	1,297,786,256
1986	13,108,134	1,542,133,412	2,165,840,703
1987	13,504,134	1,588,721,647	2,190,384,121
1988	14,431,173	1,697,785,059	2,233,555,698
1989	11,423,439	1,343,934,000	1,646,058,698
1990	8,119,487	955,233,793	1,109,756,907
1991	6,689,380	786,985,833	864,699,316
1992	9,136,207	1,074,847,882	1,160,806,325
1993	8,832,324	1,039,096,941	1,080,824,961
1994	8,980,877	1,056,573,765	1,086,840,201
1995(4)	9,274,429	1,091,109,331	1,091,109,331
Total	$116,529,843	$13,709,393,277	$16,944,234,206
Annual Average 1984-1995	$9,710,820	$1,142,449,440	$1,412,019,517

(1) Building permit revenues in current dollars.
(2) Potential construction activity estimated by dividing permit revenues by 0.85%, which is the midpoint between permit fees calculated at 0.7% of the first $100,000 estimated value of development cost, and 1% for the remainder of development cost.
(3) Estimated potential construction activity adjusted to January, 1995 constant dollars (CPI-U).
(4) Permit revenues for FY 1995 are based upon 9 months of actual fees annualized to a full year using the ratio of the full year to 9 months of data for FY 1994.

Source: City of Boston Auditing Department and Boston Redevelopment Authority's Policy Development and Research Department.

Large Public Sector Projects

During the balance of the 1990s the Boston metropolitan area will be the site of several major public sector projects. These projects include the depression of the Central Artery, the section of Interstate-93 that runs through downtown Boston, which is the key six-lane elevated interstate highway that carries traffic through the City, and the construction of a four-lane tunnel under Boston Harbor (together, the "Transportation Projects"). At present, the Central Artery connects with the Sumner and Callahan Tunnels, two two-lane tunnels under Boston, which link downtown Boston with Logan Airport and points north. The Transportation Projects, which are intended to improve traffic flow within the City, are under the control of the Commonwealth. It is estimated that the Transportation Projects will employ about 5,000 on site workers and 10,000 auxiliary workers by the late-1990s (the peak years of construction). The Transportation Projects are estimated to cost over $7.7 billion plus inflation. Federal funds will cover approximately 84% of this cost, and the Commonwealth will cover the remainder. In 1987 Congress authorized $1.9 billion for the first five years of the project, 1987 through 1992. In 1992 Congress authorized another $3.7 billion for the federal fiscal years 1993 through 1997. Although these expenditures have been authorized, they are subject to annual appropriation by Congress. The project is due for another authorization by Congress in 1998. The Commonwealth's contribution over the life of the project is expected to be approximately $1.3 billion. It is expected that appropriations will be made in annual increments by the Commonwealth as the work progresses, although this cannot be guaranteed.

The Massachusetts Port Authority has developed a long range capital program of approximately $2 billion for improvements at its facilities, most of which are located in the City. The capital program is expected to accommodate parking and vehicle unloading, to increase roadways and terminal and cargo capacity, and to result in other improvements, principally at Logan Airport.

The Massachusetts Water Resources Authority ("MWRA"), an independent state authority, is constructing one of the largest wastewater treatment facilities in the nation (the "Treatment Facility Project"). This project, which is being undertaken pursuant to a federal district court order, is scheduled for completion in 1999 as part of MWRA's capital improvement program with a cost of approximately $4.7 billion (1995 dollars). Through March of 1995, approximately $3.0 billion of work has been completed. The project is intended to bring wastewater discharges in Boston Harbor in compliance with federal and state requirements. It is being funded through state and federal grants and the issuance by MWRA of revenue bonds backed by rates and charges paid by users. Such rates and charges are expected to continue to increase each year, dictated in large part by increased debt service costs in connection with financing the court ordered portions of the capital program, and are expected to have a substantial financial impact on the local bodies served by MWRA, including the Boston Water and Sewer Commission ("BWSC").

The City is not directly responsible for the costs of any of these projects, although the BWSC, as a major user of water and sewer systems, is expected to bear some cost of the Treatment Facility Project indirectly through increased user fees. See "City Indebtedness—Related Authorities and Agencies—Boston Water and Sewer Commission." The City is currently negotiating with the Commonwealth to receive mitigation payments for any City services (such as fire and police) which may be required to support the Transportation Projects. No such services are expected to be required for the Treatment Facility Project.

Currently under consideration is the construction of a Megaplex, or a combined convention center and sports stadium complex, which would be funded through a combination of private sources and the Commonwealth of Massachusetts. A special State Commission recommended that a convention center, a football stadium, and a baseball stadium be located near the Fort Point waterfront. Legislation to that effect has been filed.

Urban Economic Development

On December 21, 1994, the City of Boston was designated an Enhanced Enterprise Community (EEC) through the Department of Housing and Urban Development. The City received $22 million in Economic Development (EDI) funds. These EDI funds are to be used within the EEC and are intended to complement and be used in concert with Section 108 Loan Guarantee funds. EDI funds may be used to write down interest rates on Section 108 loans and to establish a loan loss reserve.

The EDI grant makes the City eligible for matching Section 108 funds which can be used as capital improvement loans for commercial or industrial projects that either produce jobs of which 51% are for low and moderate income residents, or provide a benefit or service to a specific area.

As part of the EEC designation, the City also was awarded a $3 million Enterprise Community grant to conduct human service programs that were part of the City's Empowerment Zone application, such as job training and education. An additional benefit of receiving EEC designation is that it offers the City of Boston eligibility for additional tax benefits and priority in other Federal funding programs.

Office Market and New Development

The City currently has 49 million square feet of office space, of which 37 million is Class A (the most expensive category), and 12 million is Class B or C. From 1977 through 1983, local office occupancy surveys reported a consistent decline in vacancy rates, reaching 2.0% in 1983. With the addition of over three million square feet of office space in 1984, the vacancy rate rose to 11.5% by the end of that year. However, net absorption of over two million square feet was the highest in a decade. In 1986 and 1987 demand of over two million square feet annually outpaced office completions, sending vacancy rates down to 5.2% by the end of 1987. During 1988, completion of over three million square feet of new and renovated Class A office space and a decline in absorption to 1.0 million square feet brought the vacancy rate for such space up to 12.0%. (Figures for 1988 and later reflect Class A space only.) In 1989, office market absorption of 796,000 square feet, and the addition of about 718,000 square feet, reduced vacancy rates to 11.5%. Vacancy rates at year-end 1990 were 14.6% with an annual absorption rate of 583,000 square feet, when 1.9 million square feet of new office space was added.

New office construction added during 1991 totalled 905,513 square feet of office space in two buildings. The total amount of space absorbed in 1991 was a negative 163,381 square feet, driving the vacancy rate upwards. At year-end 1991, the downtown Boston office vacancy rate had risen to 17.1%, according to the BRA. As of the end of 1992, the BRA reported that the vacancy rate had come down to 15.0% as 785,283 square feet were absorbed. In 1993, only one new building, International Place Phase 2, was completed, bringing 750,000 square feet of new office space into the downtown market. Absorption of Class A office space in 1993 totalled only 151,000 square feet and consequently the office vacancy rate moved upward to 16.1%.

At year-end 1994 the most recent vacancy rate for downtown Boston, as done by CB Commercial, was reported to be 10.4%. Absorption improved notably in 1994, reaching over 1.5 million square feet downtown which combined with no additions to supply to cause the vacancy rate to come down. Despite a better office market, several events may affect the office markets adversely in the 1995-1996 period. These are the consolidation plan by both AT&T and IBM in Boston, as well as the downsizing by NYNEX and the decision by several mutual fund companies to expand operations in the suburbs rather than in the downtown. On the plus side, however, no new office space completions are expected in 1995 and 1996; a 700,000 square foot renovation is expected in 1997.

Even though Boston's downtown market vacancy rate is still high compared to early and mid-1980s levels, it remains below the national average, as determined by Coldwell Banker, a real estate brokerage corporation, in the following chart.

Comparative Office Vacancy Rates
20 Largest Downtown Office Markets as of December 31, 1994

City	Vacancy Rate	City	Vacancy Rate
Washington, D.C.	8.3%	Chicago	18.2%
San Francisco	9.4	Atlanta	18.4
Boston	10.6	Phoenix	18.4
Minneapolis-St. Paul	10.7	Baltimore	19.4
Seattle	10.9	Detroit	20.2
Denver	13.4	Cleveland	21.6
Manhattan, Midtown	13.5	Houston	22.7
Cincinnati	14.3	Manhattan, Downtown	22.8
Philadelphia	15.1	Los Angeles	26.3
Kansas City	15.2	Dallas	34.8

National Average(1) 16.3%

(1) National Average is based on 45 U.S. cities from the CB Commercial Office Vacancy Index.
Source: CB Commercial Office Vacancy Index, December 31, 1994.

Retail Market

As of 1990, the date of the last decennial census, the City was within the ninth largest metropolitan retail market in the nation, consisting of the City plus the Massachusetts municipalities of Lowell, Lawrence, Salem and Brockton. Of the approximately 10 million square feet of retail space in the City, approximately six million square feet are located in downtown Boston and Back Bay. About 4,347 retail establishments were located in the City in 1991. According to the U.S. Census of Retail Trade, retail sales in the Boston metropolitan area declined between 1989 and 1990. Since 1990 retail sales increased steadily through 1994. In 1993, retail sales reached $31.3 billion, a 5.4% rise from sales in 1992. Retail sales in the Boston metropolitan area for all of 1994 reached $34 billion, which showed a rise of 8.7% from 1993 without accounting for inflation. Data for the first six months of 1995 also show trends generally above those of 1994 although increases are generally smaller than for 1994 compared to 1993

Metropolitan Boston Retail Sales, 1989-1995
(In millions, not adjusted for inflation)

	1989	1990	1991	1992	1993	1994	1995
January	$ 2,093	$ 2,102	$ 1,958	$ 2,159	$ 2,333	$2,379	$2,518
February	2,044	2,035	1,975	2,201	2,259	2,391	2,520
March	2,348	2,359	2,259	2,387	2,507	2,859	2,874
April	2,321	2,285	2,206	2,380	2,501	2,718	2,712
May	2,577	2,507	2,452	2,532	2,559	2,856	2,916
June	2,470	2,436	2,450	2,527	2,584	2,876	2,862*
July	2,236	2,223	2,292	2,366	2,452	2,652	NA
August	2,473	2,418	2,406	2,361	2,563	2,841	NA
September	2,429	2,364	2,536	2,447	2,651	2,915	NA
October	2,380	2,306	2,400	2,546	2,698	2,889	NA
November	2,578	2,501	2,532	2,567	2,778	2,991	NA
December	3,057	2,807	2,964	3,228	3,416	3,668	NA
Annual	29,006	28,343	28,430	29,701	31,301	34,035	NA

*Preliminary.
Source: U.S. Department of Commerce, Bureau of the Census, "Current Business Reports: Monthly Retail Trade". Compiled by Boston Redevelopment Authority's Policy Development and Research Department. Data are for the five counties in metropolitan Boston: Essex, Middlesex, Norfolk, Plymouth and Suffolk.

Industrial Market and Recent Developments

As of third quarter 1994, according to the Economic Development and Industrial Corporation of Boston ("EDIC"), over 20 million square feet of industrial space was located in the City. The vacancy rate was 31.9%, with over 6 million square feet unoccupied. The average rent for quality industrial space was estimated to be approximately $4.67 per square foot. In addition, there were 3.9 million square feet of industrial research and development space in the City, which was 16% vacant with 619,000 square feet available. The average rent was estimated to be $10.65 per square foot.

According to information from EDIC, five million square feet were acquired and/or rehabilitated in the City for industrial use from 1983 through 1989. Among these projects were the multi-million dollar expansions by Teradyne, Inc., H.P. Hood Inc., EDIC's Industrial Center at the former Boston Army Base and the Marine Industrial Park, renovation of the former Schrafft's factory in Charlestown for high-technology industry, and private investments in rehabilitation for industrial use of the Stonybrook Commerce Center, the Haffenreffer Brewery in Jamaica Plain and the Howden Sirocco plant in Hyde Park.

During 1990 and 1991, significant developments included Groupe Bull's investment of $17 million in the City; its decision to consolidate its North American manufacturing resulted in the addition of a shift at its Brighton plant. A Cambridge-based biotechnology firm, Genzyme Corporation, started construction in 1992 of an $85 million biopharmaceutical manufacturing plant in Allston. Genzyme plans to build further manufacturing, research and development and headquarters facilities on the site during the 1990s.

Certain companies were forced to lay off employees as a result of poor economic conditions in the early 1990s. For example, Digital Equipment Corporation (DEC) closed its Roxbury plant in late 1993 and Stride Rite Corporation will close its distribution center in Roxbury in late 1996. These plant closings will eliminate a total of 350 manufacturing jobs, representing about one percent of the City's industrial jobs.

The City purchased the former Digital Equipment building in Roxbury in late December 1994. The facility will be used to house the Boston Technology Development Center (BTDC). The BTDC will house the Innovation Center to be operated by the Massachusetts Biotech Research Institute (MBRI). The Innovation Center can be thought of as a "super incubator" which includes four major components: a physical incubator with shared conference and reception facilities; a relationship with venture capital funding; a technology transfer office which helps locate technologies with commercial potential; and a comprehensive education and training program. EDIC is leasing approximately one-third of the DEC facility to MBRI. The remainder of the BTDC facility is being marketed directly to companies which will provide promising employment opportunities for community residents. Once the incubator companies advance to the project commercialization stage, EDIC plans to provide additional space in the Crosstown area so that numerous production jobs will also be available to Boston and the community residents.

Among the BTDC's immediate benefits to the community is the generation of 70-80 construction jobs in refitting the BTDC. MBRI will also expend a minimum of $150,000 per year on Biotechnology Education and Training programs to benefit community residents, including seminars open to the public, training programs for Boston Public School teachers, youth education programs for Roxbury residents, and workforce development programs for Roxbury residents. Over $20 million in venture capital funding has already been lined up to support the new companies that will be housed at the BTDC; these private funds were leveraged by $5 million in Federal funds which have already been awarded to the project.

Housing Stock, Housing Values, and the Linkage Program

The U.S. Census reported in April 1990 that the City's housing stock consisted of 250,863 units. From 1980, the date of the previous decennial census, through 1990, over 9,400 net new housing units were added to the supply. The composition of housing is changing. The number of private rental apartments declined between 1980 and 1990, mainly due to condominium conversions. Condominium units increased from about 4,500 in 1980 to over 33,000 in 1990, or 13% of the housing stock. Units in 1-4 family homes increased between 1980 and 1990, and now constitute over 50% of the City's housing stock. More than 80% of these structures are owner-occupied. Despite the loss of rental units since 1980, over 5,000 net new units have been added to publicly-assisted housing. In 1990, public and publicly-assisted housing constituted 17% of the City's housing stock.

Within the City, the U.S. Census reported that the median sales value of a single-family home was $161,400 in 1990. The U.S. Census also reported that the median contract rent in the City was $546 per month in 1990, when market rate units and subsidized units were combined. The City's gross housing vacancy rate in 1990 was 9%, with an estimated 6% net vacancy rate (representing units readily available for occupancy).

Greater Boston Annual Median Housing Sales Prices, 1984-1994
(For existing homes)

Year	Housing Prices	Percent of Change
1984	$100,000	21.1%
1985	134,200	34.2
1986	159,200	18.6
1987	177,200	11.3
1988	181,200	2.3
1989	181,900	0.4
1990	174,100	(4.3)
1991	170,100	(2.3)
1992	171,100	0.6
1993	173,200	1.2
1994	179,100	3.4

Note: The first and second quarter 1995 medians of $176,500 and $179,000 compare with the $170,600 and $181,300 medians for the same period in 1994.

Source: National Association of Realtors and the Greater Boston Real Estate Board.

The National Association of Realtors reported that the median sale price of homes in the Boston metropolitan area was $179,100 for 1994, a 3.4% increase from 1993 prices. This was the third consecutive year of increasing median prices for existing single family homes. Banker & Tradesman, a local trade journal, stated in its third quarter report, "Market Briefings," that during the full year 1994 there were 28.9% more residential sales in the City than there were in the full year 1993 (3,814 versus 2,960) while condominium sales increased by 8.9% over the same period (2,668 versus 2,450). The same journal reported that during the first two quarters of 1995 there was a 7.1% rise in residential sales (1,859 versus 1,735) while there was a 5.4% decline in condominium sales (1,171 versus 1,238) versus the same two quarters in 1994. The volume of condominium sales, however, are still above the levels recorded in 1992 and 1993. This moderating pace of housing sales is a result of the higher interest rates for mortgages which occurred between February 1994 and June 1995.

The City implemented its development linkage program in December 1983, in order to direct some of the benefits of downtown investment to the building of affordable housing in its neighborhoods. Under the program, real estate developers seeking approval of large scale commercial or institutional developments are required to enter into agreements obligating them to make "linkage payments" to the Neighborhood Housing Trust in an aggregate amount of $6 per square foot of construction over 100,000 square feet, of which $1 per square foot goes to a job training fund and $5 per square foot goes for housing purposes. These linkage payments are amortized over a period of either seven or twelve years, depending on the date of the initial agreement. Current agreements provide for a seven-year payment period. The seven-member Neighborhood Housing Trust holds public hearings and, together with the Boston Redevelopment Authority, approves linkage grants to selected projects. As of June 30, 1993, developers of 43 projects completed or in construction were committed to pay $55.3 million under this program. $33.7 million of this money already has been allocated for the construction or renovation of 3,800 housing units in the City's neighborhoods. Affordable housing units for low and moderate-income residents comprise 84% of this total.

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